Acknowledgment

This study was supported in part by grants from the National Institutes of Health HD00670-03 and HD00670-04.

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Department of Biology, University of Miami, Coral Gables 46, Florida (present address of Manley L. Boss: *Florida Atlantic University, Boca Raton, Florida*; of Kirsten Albrecht-Llamas: *Variety Children's Research Foundation, Miami, Florida*).

FEEDING IN THE ANNELID *ETEONE HETEROPODA*

Joseph L. Simon

The feeding behavior and food of polychaetous annelids generally are poorly known. Some of the specialized, filter-feeding or detritus-feeding sedentary species have attracted attention, for example *Sabella* (Nicol, 1930), *Chaetopterus* (MacGinitie, 1939, 1945), *Owenia* (Dales, 1957), *Terebella* (Sutton, 1957), and *Arenicola* (Wells, 1945).

It has generally been assumed that most species of errant polychaetes are carnivores. This assumption has been based in part on the presence of highly developed sensory structures, a proboscis apparatus with jaws, and similar adapations rather than on actual observation or experimentation. Sanders et al. (1962), on the contrary, found that many errant species were not carnivores, but were bottom deposit feeders, utilizing diatoms, dinoflagellates, and detritus in or on the substratum.

Little is known of the feeding behavior or food of the phyllodocid polychaetes. Pettibone (1963) reported that *Phyllodoce maculata* might prey on barnacles. Savilov (1957) listed *Eteone* as a carnivore or scavenger. The only convincing report of predation in the literature is that of Khlebovich (1959).

This paper reports a series of observations and experiments on the feeding behavior of *Eteone heteropoda,* a small phyllodocid. *Eteone* is an inhabitant of sandy intertidal flats from Maine to Chesapeak Bay and the Gulf of Mexico (Pettibone, 1963). The observations reported herein were carried out on the flats along the south side of Courtney Campbell Causeway in Tampa and Clearwater, Florida, during the months of February and March, 1965.

Field Observations

Shortly after the tide had receded, *Eteone heteropoda* were observed leaving the substratum and crawling over the surface of the flat. At the same time, *Nereis succinea* were also observed on the flat surface. When moving over the surface, both *Nereis* and *Eteone* create trails composed of mucus and adhering sand grains. When *Eteone* came upon a trail produced by another polychaete, it changed its course abruptly and began to follow the trail. With accelerated movements, *Eteone* overtook its prey and ingested it